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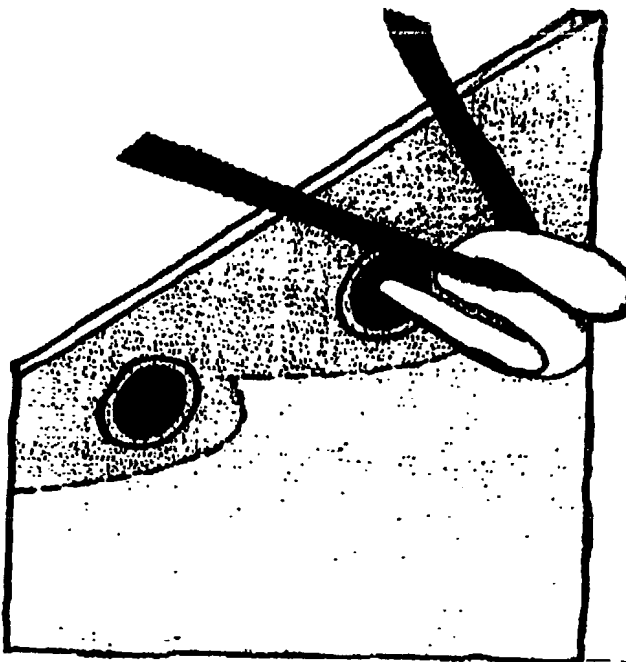
INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶ : A43C 3/00	A1	(11) International Publication Number: WO 97/40718 (43) International Publication Date: 6 November 1997 (06.11.97)
(21) International Application Number: PCT/BR97/00010 (22) International Filing Date: 31 March 1997 (31.03.97) (30) Priority Data: PI 9602363-5 30 April 1996 (30.04.96) BR (71)(72) Applicant and Inventor: DE LOUREIRO LIMA, Jorge, Luis [BR/BR]; Rua Infante Dom Henrique, 116, CEP- 81020-630 Curitiba, PR (BR).	(81) Designated States: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, ARIPO patent (GH, KE, LS, MW, SD, SZ, UG), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG). Published With international search report.	

(54) Title: REMOVABLE DOUBLE-HOOK

(57) Abstract

It is a hook that serves for fastening or joining together two parts of shoes or clothes that require lacing up (shoelace, ribbons or the like) through holes in order to be fastened (fig. 6) with the advantage of being removable, that is, it can be put in or taken out as you wish. Unlike the traditional eyelet, this new invention is attached to a shoe or a clothes item by one of its two hooks, which is inserted in the hole for lacing up (fig. 5), remaining attached to the shoe or clothes item (fig. 7) until you wish to remove it to be used in another item, to be washed, substituted for repair or for esthetic reasons, which characterizes it as an accessory item rather than an integral part of a shoe or clothes as the traditional eyelet. Its three models (fig. 1, fig. 2, and fig. 3), are characterized by the same innovative features of having a double hook and of being removable.



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REMOVABLE DOUBLE-HOOK

Invention Patent Description Report: "DOUBLE-HOOK REMOVABLE EYELET".

This report refers to the herein described invention, a DOUBLE-HOOK REMOVABLE EYELET to be attached to shoe-lace holes, in shoes and clothes that

5 - require the use of some sort of strings, ribbons and the like in order to be fastened.

Nowadays, there are several types of fastening systems such as: buttons, zippers, Velcron ribbons, snap fasteners, hooks and eyes used in shoes and clothes to join two parts together. Among them, the holes system,

10 - where laces, strings, ribbons and the like are used for the same purpose; the holes in shoe and clothes may be strengthened by eyelets, for better lacing up, reduced friction, and improved material protection. However, passing strings through holes can be all the more bothersome due to wear and tear of materials (both the shoe-lace and hole), to size ratio (tightness) between them;

15 - the existing (simple) hook eyelets, used for the same purposes, may make it easy to put in and take out the lace, since the laces don't actually go through the holes, but are rather hooked in place (hook); however, this type of eyelet is improperly attached to the shoe or clothes item, and must be removed by a specialist (cobbler or other) to protect the item where it is attached. When

20 - made of metal, it is subject to rusting after washing, and once it has been attached, its use is limited to one single item, be it shoe or clothing.

With the purpose of doing away with these inconveniences, the following invention was developed - the Double-Hook Removable Eyelet - with the basic function of fastening shoes and clothing with traditional holes,

25 - with the advantages of the (simple) hook-eyelet, plus its innovative features: that of having a double hook, and of being removable, that is, put in and taken out as wished, in a simple and safe way. Due to its double hook, it is removable, and being removable, it can be taken out at will, and thus not limited to one single item. It can be used in various items, and can be easily

30 - substituted should the item or the eyelet itself be damaged, or for esthetic purposes, since the models can be manufactured in various materials, and be adorned to satisfy every taste.

The Double-Hook Removable Eyelet is comprised of one "S" or "J" - shaped part, or two hooking parts made of pressure-resistant material, one of

35 - which will be partially attached to the shoe or clothing, and partially hold the lace, string or ribbon for fastening.

For a better understanding of the invention, please refer to the following description, which is accompanied by drawings, where:

FIGURE 1 shows the invention, in perspective, in its "S" model, where:

- 40 - (1) stands for "external end";
(2) for "internal end";

- (3) for "internal hooking curve";
- (4) for "string hooking curve";
- (5) for "optional ornament base";

The invention in its "S" model (Figure 1) will be used for shoes or
 5 -clothes with eyelets for lacing up (with strings, lace, and the like). Each hole
 will require one unit, and it must be attached in the following way: the
 "external end" (Figure 1-2) must be inserted in the hole, from the outside
 (Figure 5), until it is totally attached to its "internal hooking curve" (Figure 1-
 3). After the operation is repeated for all holes, the string must be hooked to its
 10 -"external hooking curve" (Figure 1-4) (Figure 5) in all units (Figure 6) (Figure
 7).

FIGURE 2 is a view of the invention in its "J" model, in perspective,
 where:

- (6) is the "string hooking curve";
- 15 - (7) the "external end";
- (8) the "optional ornament base";
- (9) the "leveling curve";
- (10) the "internal split hook".

The invention in its "J" model (Figure 2) will be used in shoes and
 20 -clothes with eyelets for lacing up (with strings, lace, and the like). Each hole
 will require one unit, and must be attached in the following way: its "external
 end" (Figure 2-7) must be introduced in the hole, from the inside, until the
 hooking of the "internal split hook" (Figure 2-10), which cannot go through the
 hole (Figure 9) (Figure 10), leaving the "external hooking curve" (Figure 2-6)
 25 -on the outside, so that the string can be hooked to it (Figure 8).

FIGURE 3, a view of the invention, in perspective, in its two-part
 hooking version or screw-on parts, where:

- (11) is the "string hooking curve";
- (12) the "external end";
- 30 - (13) the "leveling curve";
- (14) the "external screw to attach the internal hook screw die";
- (15) the "female screw with screw die";
- (16) the "optional ornament base";

The invention, in its two-part hooking version will be used in shoes and
 35 -clothes with eyelets for lacing up (with strings, lace, and the like). Each hole
 will require one unit, and must be attached in the following way: the "external
 screw to attach the internal hook screw die" (Figure 3-14) may be introduced
 in the hole, from the outside (Figure 11), leaving the "string hooking curve"
 (Figure 3-12) on the outside of the shoe or clothing to hook string (Figure 11);
 40 -the invention will be attached by the "female screw with screw die" (Figure 3-
 15), that will be placed on the inside of the shoe (Figure 11).

FIGURE 4 is a view in perspective of the invention in its "S" model,
 with ornament, where:

- (17) is the "external end";
- (18) the "internal end";
- (19) the "internal hooking curve";
- (20) the "string hooking curve";
- 5 - (21) the "ornament base";
- (22) the "optional ornament in place";

The invention, in all its models, has an area called "ornament base" (Figure 1-5), (Figure 2-8) and (Figure 3-16), which can hold any type of ornament (Figure 4-22).

- 10 - FIGURE 5 is a cross-section of a shoe, showing the invention in its "S" model, with a hooked string. The "internal end" can be seen as it is inserted in the hole from the outside of a shoe;

FIGURE 6 is a side view of a shoe, with the model "S" invention hooked in its four holes, with the string already hooked and laced up;

- 15 - FIGURE 7 is a side view of the same shoe, with an enlargement showing, in detail, the string hooked to the eyelet in model "S";

FIGURE 8 is a cross-section of a shoe showing the invention in its "J" model attached to the hole from the inside of the shoe with the string attached to the "string hooking curve", where both the "external end" and the "optional

- 20 - ornament base" can be seen;

FIGURE 9 shows a shoe, in perspective, where the internal side of the holes and the "internal split hook" of the "J" model can be seen;

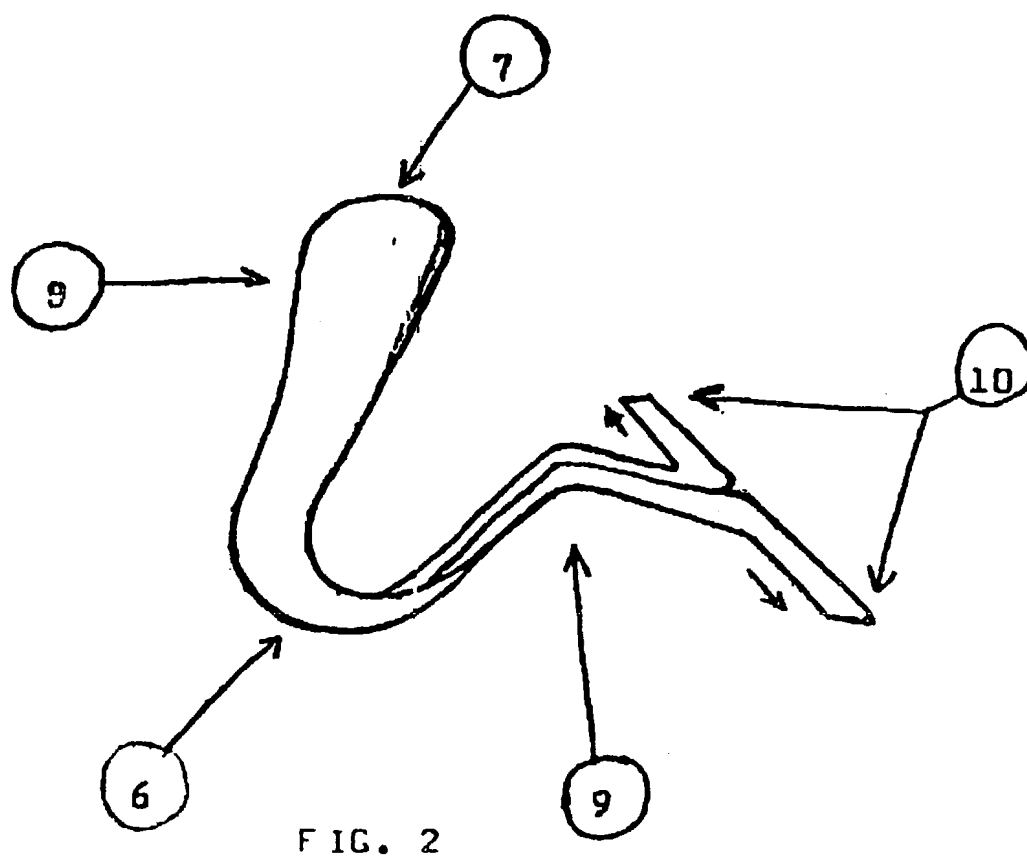
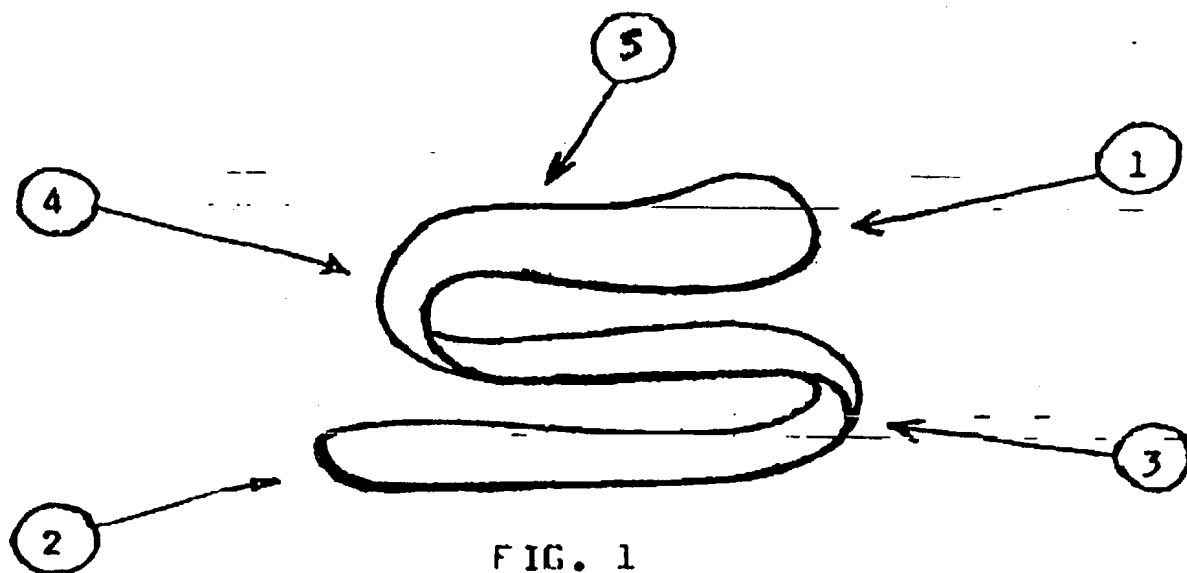
- FIGURE 10 is a shoe, in perspective, where the enlargement of the internal side of the holes shows, in detail, the "internal split hook" of the
25 - invention in its "J" model

FIGURE 11 is the cross-section of a shoe showing the invention in its two-part version, where the external screw is being inserted in the hole from the outside to be attached by the "internal hooking screw die".

CLAIMS

1. The "DOUBLE-HOOK REMOVABLE EYELET" is characterized by its "S" shape (Figure 1), with an "external end" (1), and "internal end" (2), an "internal hook curve" (3), a "hook lace curve" (4), and an "optional ornament base" (5), or a J-shaped piece (Figure 2), with a "hook lace curve" (6), an
5 - "external end" (7), an "optional ornament base" (8), a "leveling curve" (9), and a "split internal hook" (10), or two snap-on or screw-on parts (Figure 3), with a hook lace curve (11), an "external end" (12), a "leveling curve" (13), an "external screw to attach the internal hook screw die" (14), a "female screw with screw die" (15) and an "optional ornament base" (16), all of them double-
10 - hook and removable.
2. According to claim 1, the "DOUBLE-HOOK REMOVABLE EYELET" is characterized by ornament (Figure 4) (22), set on the "optional ornament base" (21) or as indicated in the remaining claims (Figure 1) (5), (Figure 2) (8), and (Figure 3) (16).

1/5



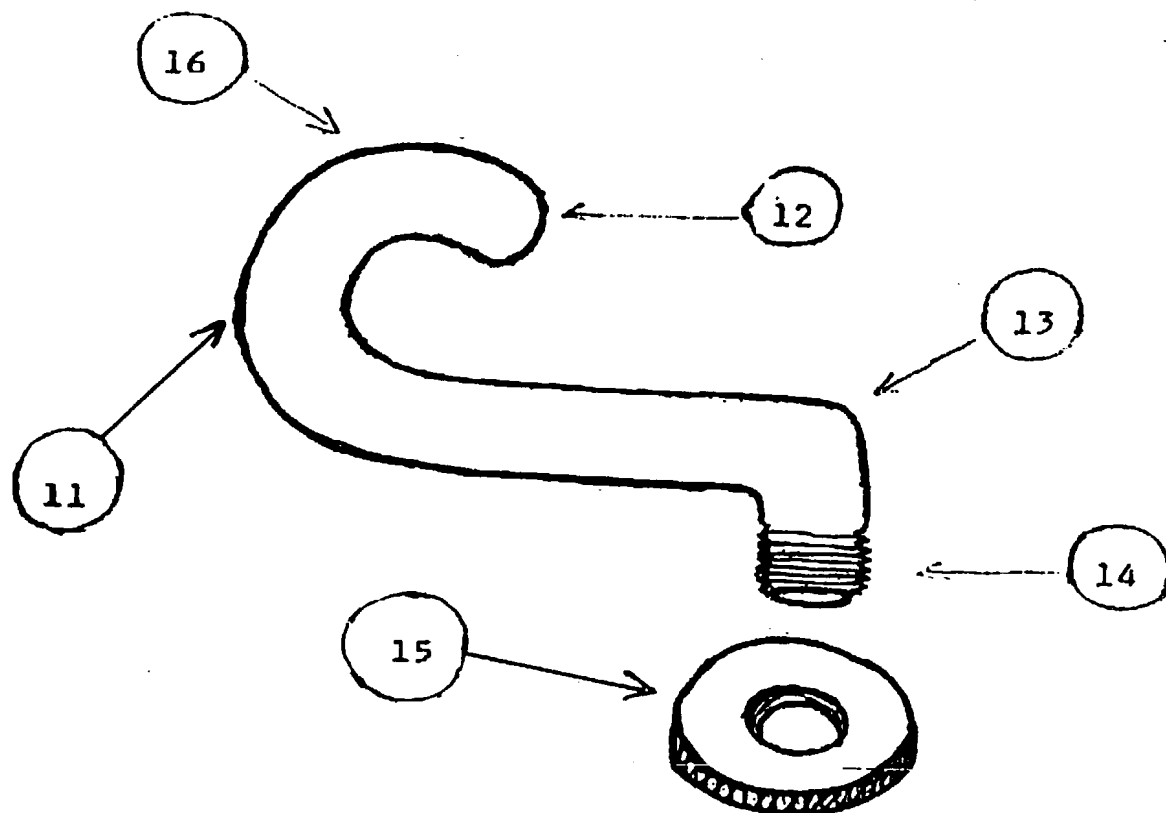


FIG. 3

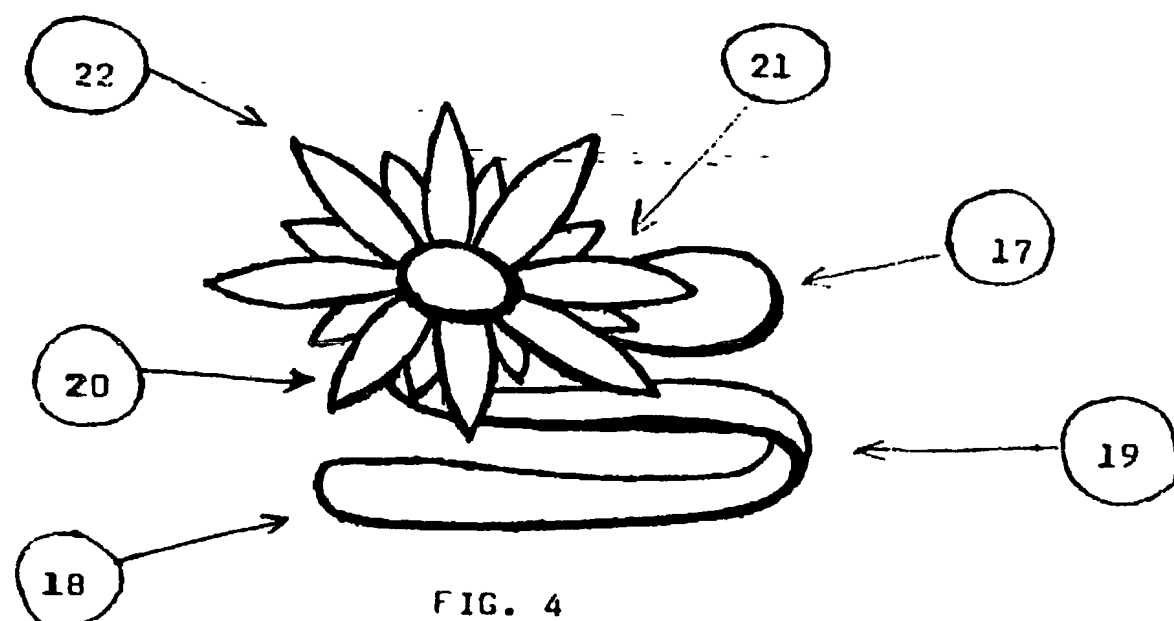


FIG. 4

3/5

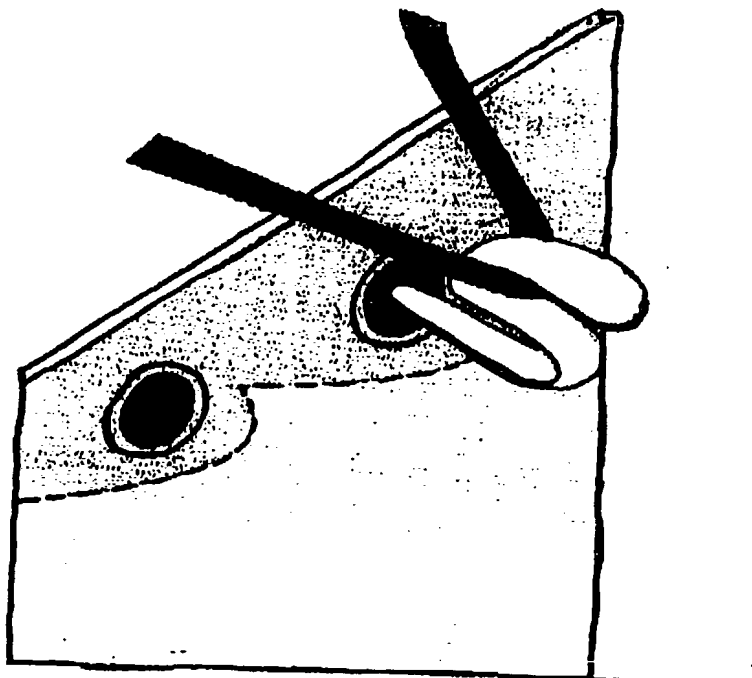


FIG. 5

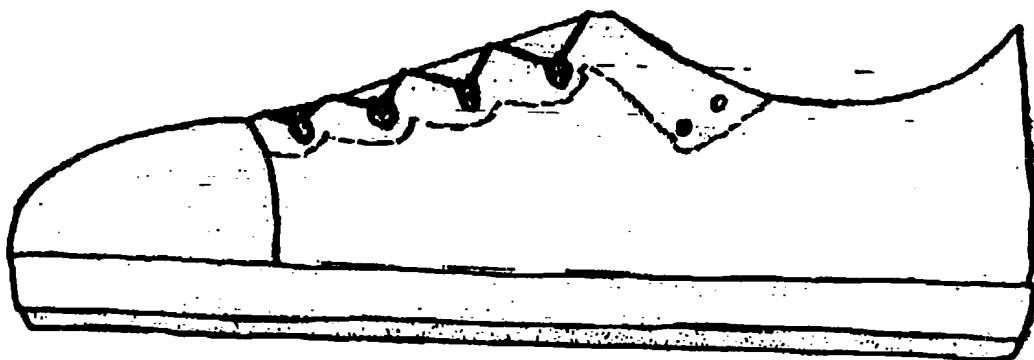


FIG. 6

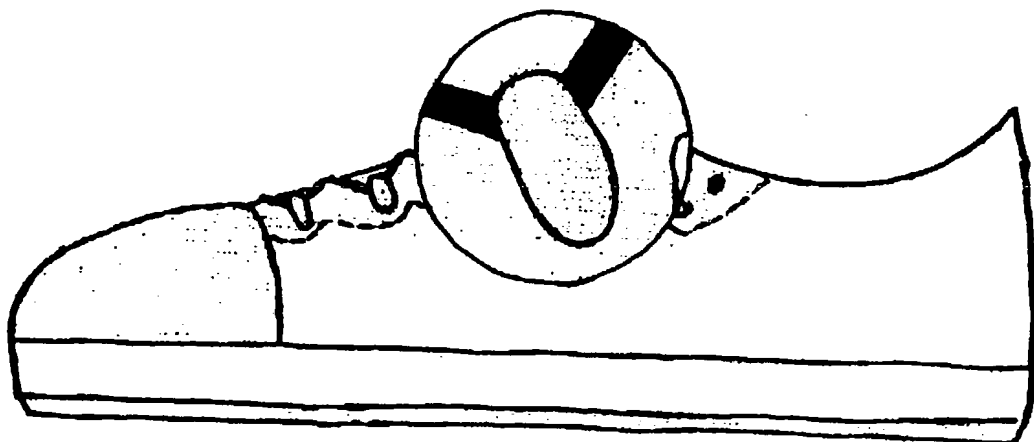


FIG. 7

4/5

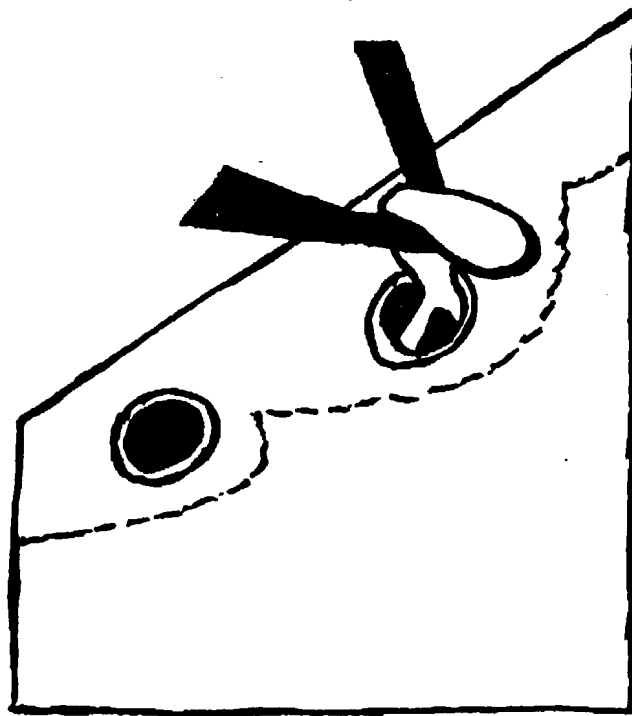


FIG. 8

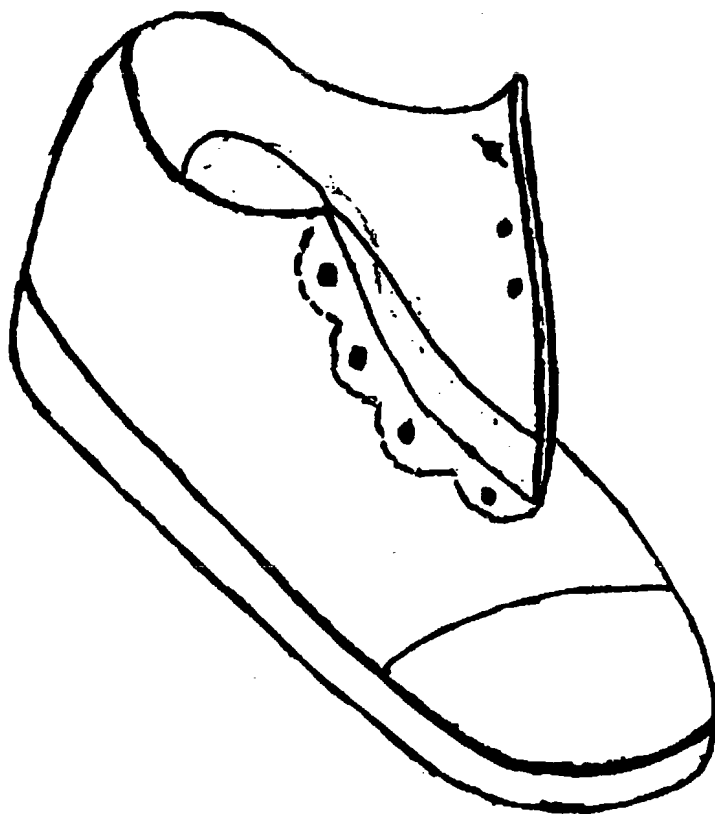


FIG. 9

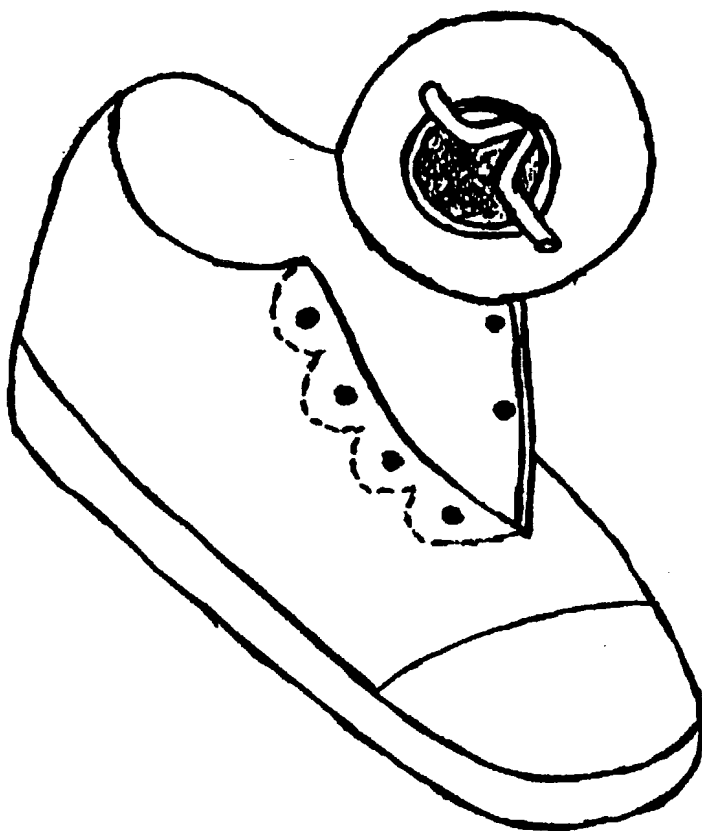


FIG. 10

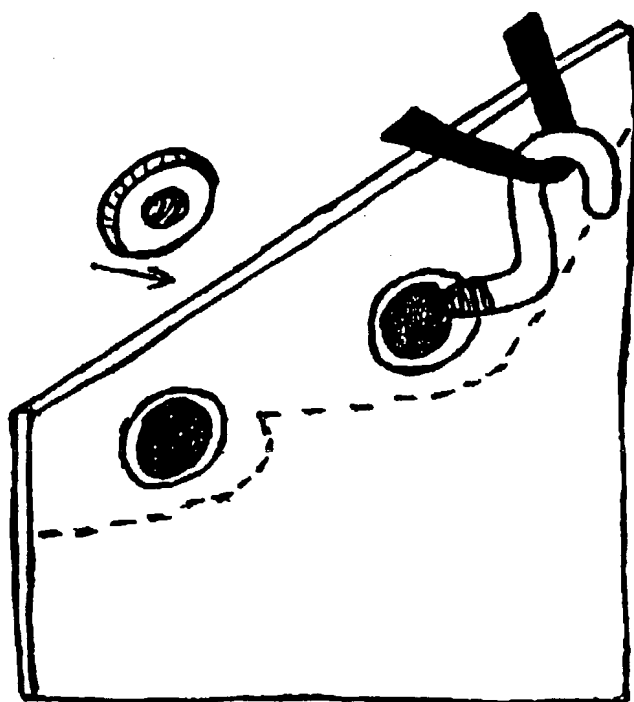


FIG. 11

INTERNATIONAL SEARCH REPORT

Inter. Appl. No.
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A. CLASSIFICATION OF SUBJECT MATTER
IPC 6 A43C3/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 6 A43C B21D

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C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	FR 2 414 307 A (MELIARD GEORGES) 10 August 1979 see the whole document ---	1,2
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